

Date: Monday, 12/01/2009 2:38:19 PM
 User: Julie Dawson

Process Sheet

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	STUD
Job Number :	44688		
Estimate Number :	13141		
P.O. Number :		Part Number :	D36911
This Issue :	12/01/2009	S.O. No. :	
Prsht Rev. :	NC	Drawing Number :	D3691 REV B
First Issue :	11	Project Number :	N/A
Previous Run :	37119	Drawing Revision :	B
Written By :		Material :	
Checked & Approved By :	JUP 09-01-13	Due Date :	23/02/2009
Comment :	Rev:A New Issue 08-01-29 JLM Verified By:EC Est Rev:B Material Change 09-01-07 JLM Verified By:EC		

Qty: 6 Um: Each

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	M174PHH900R1000	17-4PH SS ROUND BAR 1.00 COND.900
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Comment: Qty.: 0.7350 f(s)/Unit Total: 4.4100 f(s)
 17-4PH SS ROUND BAR 1.00 ****CONDITION H-900****
 BATCH: M110540

RD 09/01/21

⑥

2.0	BAND SAW	BAND SAW
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Comment: BAND SAW
 Cut blank 7.850" long

RD 09/01/21

⑥

3.0	DOOSAN LATHE	DOOSAN LATHE
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Comment: DOOSAN LATHE
 1-Turn as per Folio FA716 Rev: N/A & Dwg D3691 Rev: R

RD 09/01/21

⑥

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

RD 09/01/21

⑥

5.0	LATHE CONV.	CONVENTIONAL LATHE
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Comment: CONVENTIONAL LATHE
 Face to finished length as per dwg D3691 AND center drill as per Dwg D3691

RD 09/01/21

⑥

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STUD

Job Number: 44688

Part Number: D36911

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



mf 09/01/21



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

(6)

7.0

DOOSAN LATHE

DOOSAN LATHE



Comment: Doosan Lathe

1- Turn as per Folio FA716 Rev: *1/A* & Dwg D3691 Rev: *B*

2-Deburr per dwg D3691

mf 09/01/21

(6)

8.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

mf 09/01/21

(6)

9.0

QC8

SECOND CHECK



Comment: SECOND CHECK

mf 09/01/23

(6)

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock
Location: _____

P09/01/28 (6)

11.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/01/29 *mf*

Job Completion



96

LEI per ASTM1417, Level 2
per *Q1* 038

QC#5 5060128 (6)

mf 09-01-28

9d+Receiving

09/01/28 (6)

50 09.01.28 (6)

qc. Purchasing
issue P/O 28084

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 44688
Description:		Part Number: D3691-1
Inspection Dwg:	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

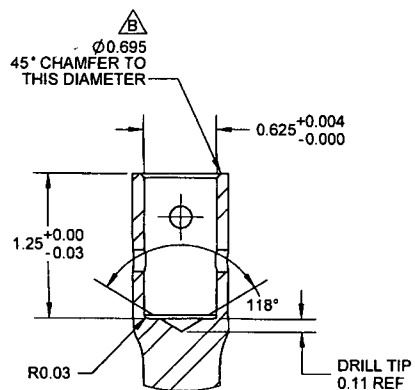
☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.695 x	+/- .010	.690				
45°	+/- 1/2°	45°				
.625	+ .004 - 0.0	.627				
1.25	+0.0 - .03	1.235				
118°	+/- 1/2°	118°				
R.03	+/- .030	R.01				
.11 REF	+/- .030	.100				
90°	+/- 1/2°	90°				
.189	+ .006 - .001	.190				
.750	+0.0 - .010	.745				
1.31	+/- .030	1.31				
1.65	+/- .030	1.65				
.659	+0.0 - .015	.650				
7.750	+/- .015	7.752				
2.90	+/- .030	2.90				
.075 x	+/- .010	.075				
45°	+/- 1/2°	45°				
.375	+0.0 - .010	.370				
R.25	+/- .030	R.25				
R.50	+/- .030	R.50				
3/4-16 UNF	2 A	2 A				

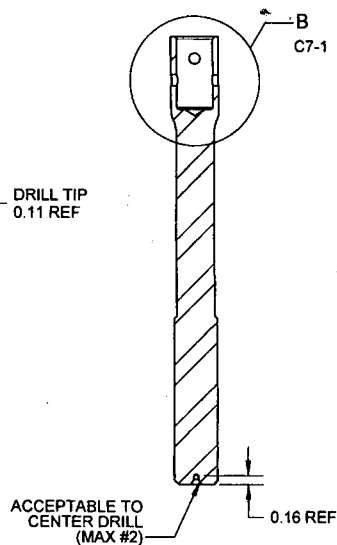
Measured by: <i>ML</i>	Audited by: <i>ML</i>	Prototype Approval:	N/A
Date: 09/01/21	Date: 09/01/23	Date:	N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

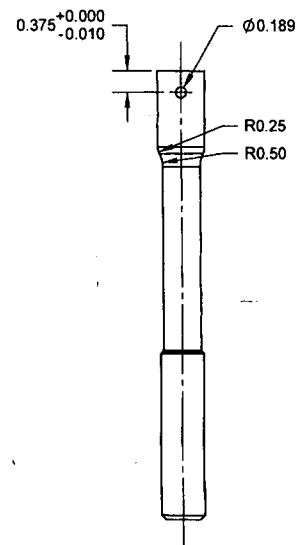
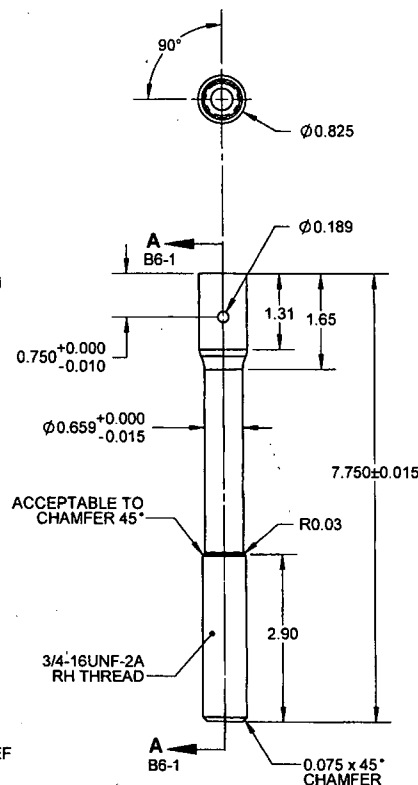
8 7 6 5 4 3 2 1



DETAIL B
SCALE 2X
C6-1



SECTION A-A
D4-1



RELEASED
08/12/15

D3691-1 STUD

- NOTES:**
- 1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.81 lb
 - 8) PLI PER ASTM 1417 LEVEL 2

B	CHANGE TO 17-4PH H-900 (ZN A8-1); Ø0.695 WAS Ø0.665 (ZN D8-1); REFORMATTED TO CURRENT DWG STANDARDS	RF	08.11.24
A	NEW ISSUE	RF	08.03.12
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D3691	SHEET 1 OF 1
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	STUD	NTS
DATE	08.11.24	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

WORK ORDER
44688
SUBJECT TO APPROVAL
CONTROLLED COPY
RETURN TO
ENGINEERING
COPY



LIQUID PENETRANT TEST REPORT

P- 14931

CLIENT DART AEROSPACE DATE JAN-28-2009 PAGE 1 OF 1
ATTENTION LINDA ACUREN JOB NO. 188-08-001282 TIME AM ☒ PM ☐
ADDRESS 1270 ABERDEEN ST PO/NO. 8084
HAWKESBURY, ONT. K6A-1K7 WORK LOCATION MAIN SHOP - HAWKESBURY
PROJECT F.P.I ON MACHINED PARTS AND CROSS TUBES ACCEPTANCE STD. ASTM 1417 REV./DATE 2007
ITEM(S) EXAMINED 48 MACHINED PIECES
3 CROSSTUBES 100% EXTERNAL AND ONE CROSSTUBE REREXAMINE

JOB DESCRIPTION WET FLOUORESCENT LIQUID PENETRANT INSPECTION
PROCEDURE NO. LT-XXXX REV./DATE TECHNIQUE NO. LT-XXXX-XXX REV./DATE
PART NO. MATERIAL MACHINED ALUM THICKNESS
SCOPE CARRIED OUT ON 100% EXTERNAL

TEST DETAILS

METHOD ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED
FAMILY BRAND MAGNAFLUX BLACK LIGHT S/N 8171 ☐ OUTPUT > 1000 μ W/cm² ☐ AMBIENT < 2 fc
PENETRANT 2L 07 MINIMUM DWELL TIME 45-10 MIN. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE
PENETRANT REMOVER H2O MINIMUM DRY TIME >10 MIN. OTHER
DEVELOPER SKD 52 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N CAL DUE DATE FEB-09
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

TEST SURFACE

SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☐ MACHINED ☐ SHOT BLASTED ☒ CLEAN BARE METAL
SURFACE TEMPERATURE ☐ < -4°C/ 20°F ☐ -4°C/ 20°F TO 10°C/ 50°F ☐ 10°C/ 50°F TO 52°C/ 125°F ☐ > 52°C/ 125°F

RESULT: ☐ METRIC ☐ IMPERIAL

COMMENTS		ACCEPT	REJECT
1	TS# 44214	✓	
1	45006	✓	
1	44215	✓	
1	44944	✓	
2	45299	✓	
10	44824	✓	
6	44687	✓	
2	45297	✓	
6	44823	✓	
6	44686	✓	
6	44685	✓	
6	44688 (12)	✓	

ALL ITEMS FOUND
ACCEPTABLE FOR JOB# NOTED

Scope of Service: Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representation or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the standard of care or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE Michael Munro DTR #
TECHNICIAN (SIGNATURE): Mike Johnston SIGNATURE REPORT REVIEWED BY:
NAME (PRINT): Mike Johnston 1ST TECHNICIAN NAME INITIALS
CGSB LEVEL II SNT LEVEL CGSB LEVEL SNT LEVEL
CGSB REG. NO. 6066 CGSB REG. NO.